

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1. – 25. (Cancelled)

26. (Currently Amended) A method for generating a database of sequences that are greater than or equal to about 100 nucleotides in length, wherein each sequence is entered into the database only one time, the method comprising the steps of :

selecting a query sequence from a redundant database, said redundant database comprising random [short] sequences of an informational biomolecule;

masking said query sequence with known repeat sequences to create a contig masked query sequence capable of masking novel repetitive elements;

comparing said contig masked query sequence with identified unique sequences;

identifying a unique portion of the query sequence that does not have a similar sequence in any of the identified unique sequences and remembering [same] said unique portion of the query sequence; and

adding the unique portion of the query sequence to a unique database [in order to reassemble the data therein via an iterative learning process into an assembly with those in the known repeat/masking database], and

displaying the unique database.

27. (Cancelled)

28. (Original) The method of claim 26, wherein said sequence is a deoxyribonucleotide sequence.
29. (Original) The method of claim 26, wherein said sequence is a ribonucleotide sequence.
30. (Original) The method of claim 26, wherein said sequences are derived from animal DNA or RNA.
31. (Withdrawn) The method of claim 30, wherein said animal is a human.
32. (Withdrawn) The method of claim 30, wherein said animal is a mouse.
33. (Withdrawn) The method of claim 26, wherein said sequences are derived from plant DNA or RNA.
34. (Withdrawn) The method of claim 33, wherein said plant is a single-cell plant.
35. (Withdrawn) The method of claim 26, wherein said sequences are derived from fungal DNA or RNA.
36. (Withdrawn) The method of claim 26, wherein said sequences are derived from DNA or RNA of a microorganism or virus.
37. (Withdrawn) The method of claim 26, wherein said sequences are derived from DNA or RNA of a single-cell eukaryote.
38. (Withdrawn) The method of claim 26, wherein said sequences are derived from synthetic man-made DNA or RNA.

39. (Withdrawn) The method of claim 26, wherein said sequences are postulated based upon amino acid sequences.
40. (Withdrawn) The method of claim 26, wherein said database is encoded in a biological medium.
41. (Withdrawn) The method of claim 26, wherein said database is encoded in a written medium.
42. (Original) The method of claim 26, wherein said database is encoded in an electronic medium.
43. (Original) The method of claim 42, wherein said electronic medium is a computer-readable medium.
44. (Original) The method of claim 43, wherein said computer-readable medium is addressable through an internet connection.
45. (Original) The method of claim 26, wherein said redundant database is a Public Domain Database.
46. (Original) The method of claim 45, wherein said Public Domain Database is GenBank.
47. (Withdrawn) The method of claim 45, wherein said Public Domain Database is dbEST.
48. (Withdrawn) The method of claim 45, wherein said Public Domain Database is TIGR.

49. (Withdrawn) The method of claim 45, wherein said Public Domain Database is SwissProt.

50. (Original) The method of claim 26, wherein said comparing step further utilizes a Database Search Algorithm.

51. (Original) The method of claim 50, wherein said Database Search Algorithm is BLAST.

52. (Withdrawn) The method of claim 50, wherein said Database Search Algorithm is FASTA.

53. (Withdrawn) The method of claim 50, wherein said Database Search Algorithm is Smith-Waterman.

54. (Original) The method of claim 26, wherein said comparing step further utilizes a Scoring Matrix Program.

55. (Withdrawn) The method of claim 54, wherein said Scoring Matrix Program is PAM.

56. (Withdrawn) The method of claim 54, wherein said Scoring Matrix Program is BLOSUM.

57. – 60. (Cancelled)